



ETHINKING HIGH SCHOOL

five profiles of innovative models for student success

A study by WestEd for the Bill & Melinda Gates Foundation





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Tracy A. Huebner

Grace Calisi Corbett

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Introduction

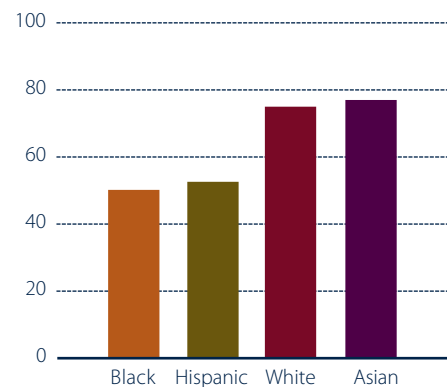
BOLD NEW APPROACHES IN SMALL SCALE HIGH SCHOOLS

*"In an increasingly competitive, global economy, the consequences of dropping out of high school are devastating to individuals, communities, and our national economy. At an absolute minimum, adults need a high school diploma if they are to have any reasonable opportunities to earn a living wage... Yet, with little notice, the United States is allowing a dangerously high percentage of students to disappear from the educational pipeline before graduating from high school."*¹ < Gary Orfield, Daniel Losen, Johanna Wald, and Christopher B. Swanson, 2004 >

Recent studies, such as Orfield et al.'s work cited above, show that only 68% of all students entering high school nationwide will earn their diploma. The news gets worse. Students from historically underserved groups – Black and Hispanic – have slightly more than a 50% chance of graduating from high school (see Figure 1). Further, only 20% of Black students and 16% of Hispanic students are considered "college ready."³

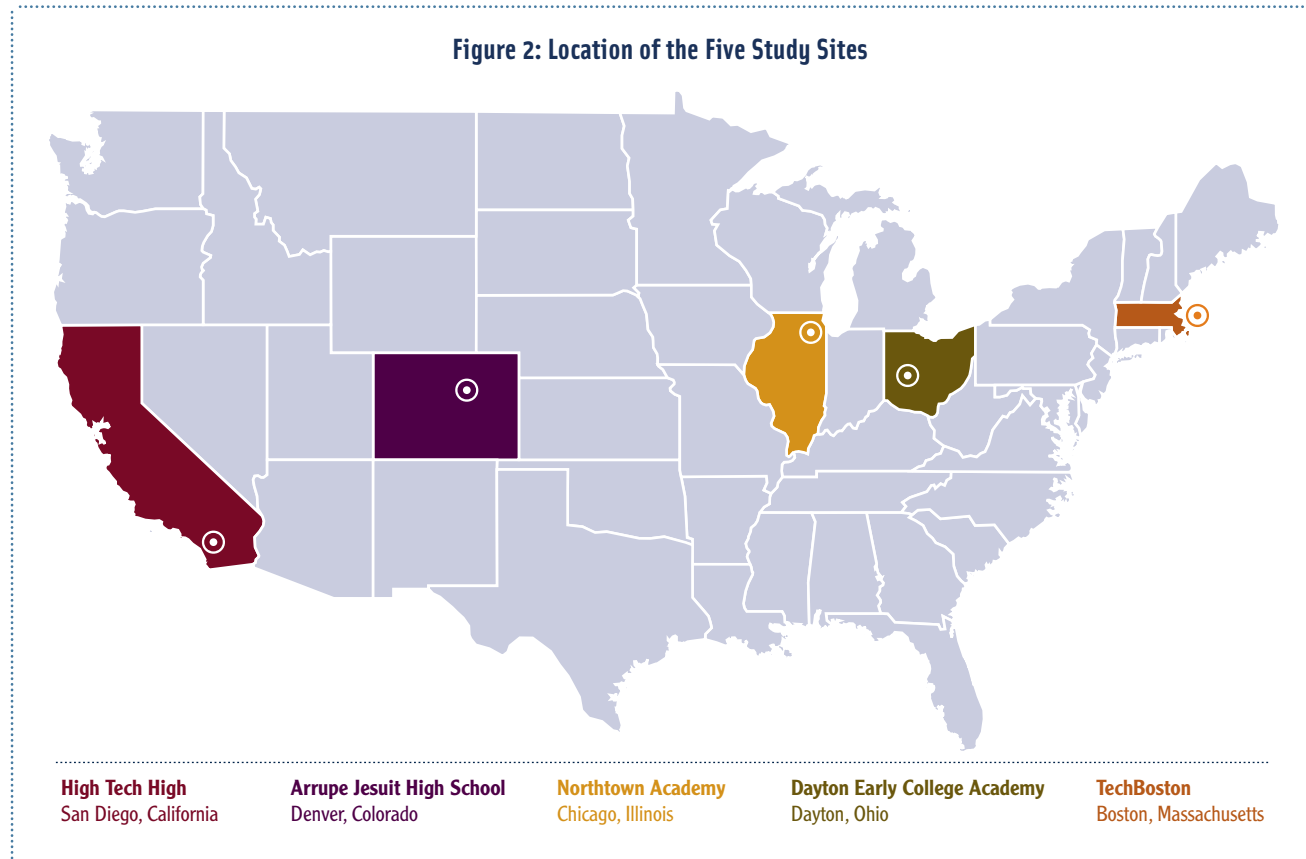
Educators and policy makers are well aware of this crisis and are actively developing and implementing several interventions to try and reverse this trend. Over the last decade, studies have shown that students entering high school are more likely to succeed in an environment, usually small and personalized, that keeps them motivated academically and effectively prepares them for college, work, and

Figure 1: Percent of Students Graduating from High School by Ethnicity²



citizenship.⁴ As a result, funding sources – ranging from a federal grant program to private foundation investments – have recently been made available for the creation of high schools that embrace this approach. For example, the Bill & Melinda Gates Foundation partners with communities nationwide to start new small schools and convert existing schools into smaller ones. Each of these small public high schools⁵ offers students a rigorous education in a more personalized setting. To date, the Foundation has invested \$745 million dollars to fund 1,930 schools working through 180 grantees.⁶ By fall 2004, more than 400 new schools will have opened nationwide.

Such a large investment of resources begs the question: Is this effort making a difference? Although long-term evaluation efforts are underway⁷ and will not be available for several more years, this report provides a snapshot of the progress



made so far by five high schools supported by the Foundation. They are either schools that replicate successful models or ones that have been funded for replication around the country. WestEd was asked by the Bill & Melinda Gates Foundation to design and carry out a short-term study focused on these five sites.⁸ Based on interviews with key leaders and an examination of student data at the five schools, WestEd sought answers to the following questions:

❖ **What is happening at these select schools?**

How are these schools differentiating themselves from other schools? What are their distinguishing characteristics?

❖ **Who are these schools educating?**

What factors motivated the development of these schools? What kinds of students are seeking out these schools?

❖ **How are the students in these schools doing?**

How are students doing in these new sites relative to other students within their district and, when available, in the state and/or nationally?

GENERAL DESCRIPTION OF THE FIVE SITES

To learn more about these schools and how their students are doing academically, WestEd collected descriptive data in order to build profiles on each of the five high schools. The profiles – presented geographically from east to west – include behavioral and academic data such as student enrollment and attendance, student demographics, student performance on state and national tests, and curricular elements such as course descriptions, and number and kind of advanced placement courses offered. Some schools had limited data available. In those cases, a proxy for student performance was used, such as attendance and college acceptance rates. School climate (school safety, learning conditions and opportunities) was determined by reviewing coursework; collecting information on truancies, suspensions, and expulsions; conducting interviews with principals; and conducting surveys among school administrators, focusing on the attributes of the school's environment.

All five schools are part of design networks that have been replicated in several sites across the country. Table 1 details each site's geographic locale, opening date, and the network of schools with which it is affiliated, along with a description of the model's framework.

Table 1: Five Sites at a Glance

SCHOOL	LOCALE	OPENING DATE	NETWORK OF SCHOOLS ⁹
TechBoston	Boston, MA	2001-2002	Part of Boston's Pilot School Network, a 12-school network with a theme-based orientation on technology.
Dayton Early College Academy	Dayton, OH	2003-2004	Part of the Early College Network, a 100-school network based on a traditional model wherein students take courses both at the high school and at select colleges.
Northtown Academy	Chicago, IL	2003-2004	Part of the Civitas Network, a 4-school network using a traditional academic model closely linked to performance tests.
Arrupe Jesuit High School	Denver, CO	2003-2004	Part of the Cristo Rey Model, an 11-school network based on a traditional work/study model combining paid internships with academics.
High Tech High	San Diego, CA	2000-2001	First in the HighTech Network of 10 schools. This is a theme-based model utilizing technology to better prepare students for college.

FINDINGS

Survey data, interviews, document reviews, and Internet searches all helped us to build initial pictures of how each of these five schools are doing and the commonalities that exist. Below are key findings and highlights that raise questions for further study. Profiles on each of the five sites follow.

FINDING 1 > THE SCHOOLS SERVE ETHNICALLY AND SOCIOECONOMICALLY DIVERSE STUDENTS.

- ❖ In almost all sites, the ethnic makeup mirrors that of the school district and/or the community it serves. That is, the sites consist of predominantly Black or Hispanic students ranging from 53%-83% (Black) to 43%-86% (Hispanic).
- ❖ A significant percentage of each site's student population lives below the poverty level – as defined by students' eligibility for the Free/Reduced Price Meal program – ranging from approximately 35% at Northtown Academy in Chicago to over 85% at TechBoston Academy in Boston.

FINDING 2 > THE SCHOOLS ARE HIGHLY SOUGHT AFTER BY STUDENTS OF ALL ABILITIES; MANY OF THE STUDENTS WHO ENROLL AT THESE FIVE SITES ENTER PERFORMING BELOW GRADE LEVEL.

- ❖ All schools maintain waiting lists and, on average, there are approximately 200 students on each school's list.
 - ❖ All of the five sites have some 9th graders entering the school reading below grade level. In one instance, several freshmen entering are reading only at a 3rd to 4th grade level.
 - ❖ When available, school summary data suggest students show gains in reading scores.¹⁰
-

FINDING 3 > STUDENTS ARE ENROLLED IN A RIGOROUS AND ENGAGING CURRICULUM.

- ❖ Higher-level coursework (i.e., AP, honors, college level, college classes) is available to all students.
 - ❖ Most schools have designed a learning environment that is connected to the students' real-world interests. For example, High Tech High and TechBoston Academy focus on technology. Arrupe Jesuit High School has a strong work study/internship component to help students defer the cost of tuition as well as help them develop maturity and communication skills.
 - ❖ Several schools motivate students toward higher learning by giving them the opportunity to experience college-level courses (and in some cases earn college credits) while in high school.
-

FINDING 4 > SCHOOLS DEVELOP AND MAINTAIN SUPPORTIVE LEARNING ENVIRONMENTS.

- ❖ All five sites offer innovative environments for teaching and learning that extend beyond the boundaries of a traditional classroom. For example, at High Tech High students work in learning stations in large open spaces.
- ❖ Students and teachers build a close bond through advisory groups and home visits. Across all five of the sites, teachers are grouped with five to ten students and expected to keep close contact with them in their four years of high school. Additionally, at least two of the sites have staff conduct home visits to meet with students and their families in an attempt to build a stronger network of support for these students. All schools in this study cite the importance of these close relationships.

FINDING 5 > STUDENTS ARE HIGHLY ENGAGED IN LEARNING.

- ❖ Attendance rates at all five sites are higher than the district average.
 - ❖ On average, the number of suspensions and expulsions at the five sites is significantly lower compared to their local districts.
-

FINDING 6 > STUDENTS AT ALL FIVE SITES ARE ACHIEVING ACADEMIC SUCCESS.

- ❖ Where longitudinal data are available, there is a steady rate of improvement on state academic achievement tests, not only schoolwide but for all significant subgroups.¹¹
- ❖ Students at one school scored substantially higher on the SAT college entrance exam than the district and state averages on both the verbal and math sections.
- ❖ At a site that has been in operation as a charter school for one year, 9th grade test scores on the state-mandated test were the highest scores of any charter school in the urban district.¹²
- ❖ One hundred percent of seniors at two of the sites applied to college and all 100% of them graduated from high school. In comparison, the district graduation rate averages ranged from 49% to 61%.¹³

ELEMENTS TO SCHOOL SUCCESS

Based on interviews with principals, elements critical to their school's success include:

- ❖ **Strong Faculty and Staff.** Strong leadership sets the tone and quality of relationships within the classrooms and throughout the schools. Principals specifically cited the importance of having a common vision and mission for the school (e.g., all students will graduate and go to college), encouraging collaboration among teachers, holding all staff in the building accountable for students' learning, and reinforcing the importance of creating strong interpersonal (i.e., supportive/nurturing) relationships between students and staff.
- ❖ **Innovative School Designs.** A clear school plan with specific elements designed to reinforce challenging academic coursework, an engaging curriculum, and a personalized learning environment have helped the students achieve academically. While these designs differ across the five sites, all create dynamic environments conducive to personalized learning.
- ❖ **Emphasis on Effective Teaching and Curriculum.** Curricular approaches are key to each school's success. One school cites its unique interdisciplinary approach in which teachers team-teach across content areas. At another site, the tight curricular focus tied to the ACT college entrance examination is purposefully designed to prepare students for college.

- ❖ **Flexibility in School Governance.** School administrators cite autonomy from central office control helps them to develop unique learning conditions for students. They believe that their loose ties to a district create a greater sense of autonomy and more freedom to implement different and innovative structures and strategies.

RECOMMENDATIONS FOR FURTHER STUDY

The five sites documented in this work illustrate that it is possible to take action against the alarmingly high dropout rate of high school students in the United States and properly prepare them for college. And so far the data suggests that these schools are making significant progress. The schools create environments that aim to prepare inner-city youth for college. They enroll students who, for the first time, may be exposed to the notion that there is in fact a place for them in high school and beyond. Their success indicates areas of further research to understand how to scale their success to reach more students in more cities nationwide.

Incentives to start new schools

Typical of the interviews we conducted was the sentiment that these schools were created from a perceived need that students needed more options for secondary education. Principals interviewed felt that the “typical high school” wasn’t helping to meet the needs of all students, and in fact was hindering academic development. Creating small learning communities where teachers are individually aware of and responsible for students makes it harder for the students to “slip through the cracks.” It also builds a sense of community at the school. Principals cite this close personal attention as critical to their students’ success and to building their school’s culture.

RECOMMENDATION

Further study to understand what key conditions in these five schools are helping students to achieve academically and how these conditions differ, if at all, from traditional high schools.

Autonomous sites

Principals across the five schools discussed the importance of having independence in hiring and budgetary decisions as well as scheduling nontraditional times for work and study. Three of the five schools we studied gained this autonomy as charter sites. It is important to note that although we studied charter schools, this is not a study of charter schools. One site we studied was a self-proclaimed “hybrid,” a public school employing some but not all aspects of charter status.

RECOMMENDATION

Further study to examine the role the district plays, if any, in supporting these schools over time. In addition, it will be important to learn if these schools impact the district’s work with its other schools.

Characteristics of effective school leaders

Most notable to us across all five sites was the commitment and foresight of the school leaders. Research shows that the principal or head of school is critical in supporting student achievement.¹⁴ Although the organizational structures and processes at these sites are easily replicable, these dynamic leaders are not. All too often, a school loses a key leader and its efforts are stalled or, worse, reversed within a year’s time.

RECOMMENDATION

Further study into the roles of these five school leaders and how they manage to sustain efforts over time both in their schools and across schools in their networks.

Impact of curricular strategies

Some of the sites we examined have a focused curriculum, whereas others offer more student choice. Despite this range, all five schools know exactly what they want students to learn and how they will support such student learning. Each of the five sites represents to some degree an approach other sites are taking in the network. We do not have the data or the depth of study to examine the differences across these sites and their impact on achieving their intended goals.

RECOMMENDATION

Further study into these various curricular strategies and how they impact school climate, teacher satisfaction, and student achievement.

Uncovering techniques to prepare all students for college

All five sites we studied emphasize preparing students for college. Some of the sites have developed working relationships with neighboring colleges so that their students may take some classes on a college campus. Innovative collaborations are the norm across these sites. Although these schools are new, it is not too early to begin tracking how their college-bound seniors are doing.

RECOMMENDATION

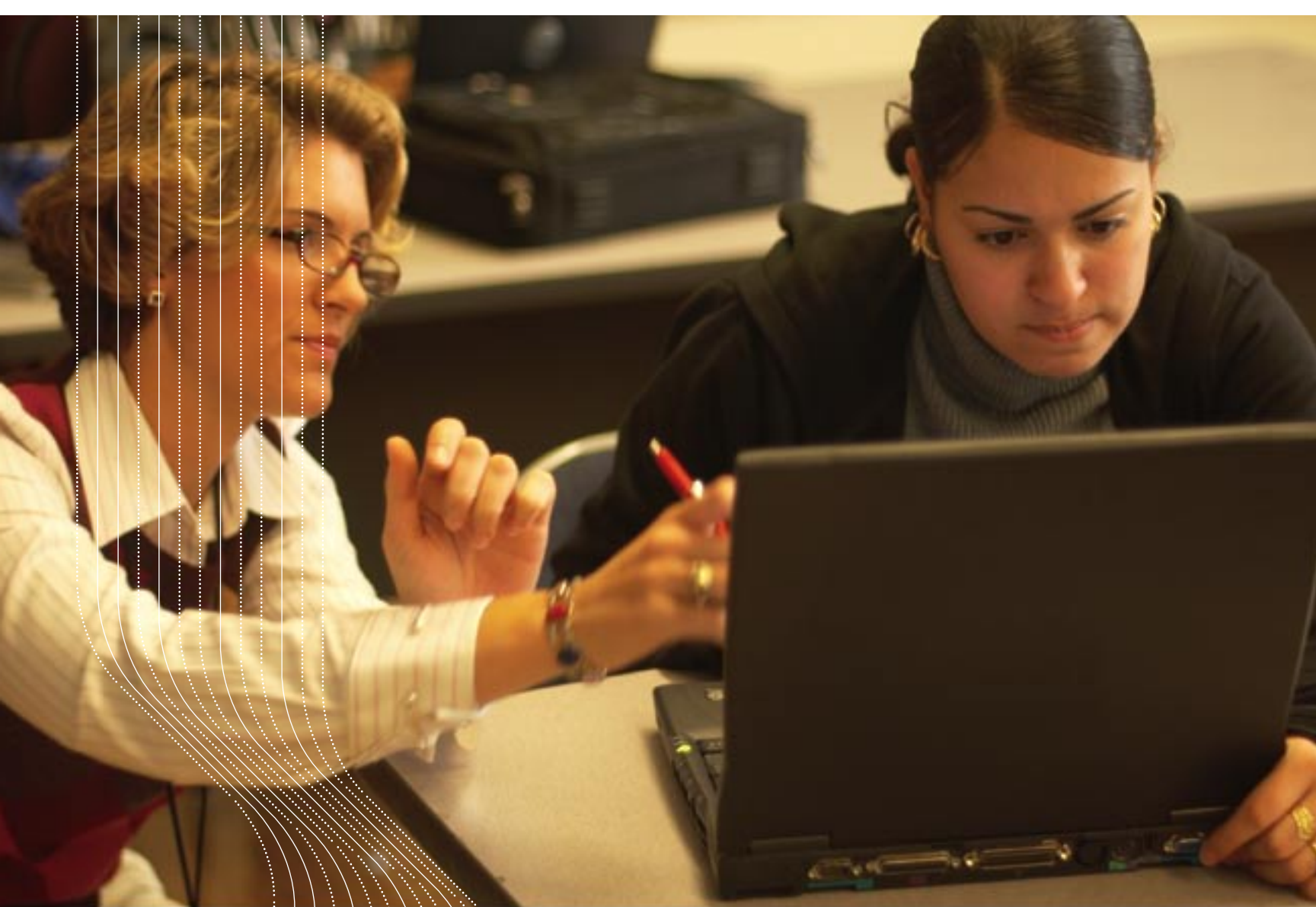
Track students from these five schools who are taking college classes to determine how well prepared they are for college.

CASE STUDIES: A PROMISING START

The following school profiles, presented geographically from east to west, are divided into four sections:

- ❖ Background and description of the school. This section addresses why the school was founded and its key attributes – which are often quite opposite of what one would find in a traditional high school setting.
- ❖ A general profile of the students attending the school.
- ❖ Student performance data and, if applicable, student acceptance rates to college and performance on college entrance examinations. When possible, we compare student achievement data at the district, state, and national levels.
- ❖ Anecdotal testimonies from school leaders about what they believe are the leading principles and/or structures that help make their school a success.

Teach Boston Area



BOSTON, MASSACHUSETTS

TechBoston Academy

A RIGOROUS TECHNOLOGY-BASED CURRICULUM FOR ALL STUDENTS

"We have a supportive environment here and students know that if they don't succeed the first time, they will be supported to try again and again. Students don't slip through the cracks." < Mary Skipper, Headmaster/CEO >

A RIGOROUS CURRICULUM FOR ALL STUDENTS

Boston Public Schools (BPS) is one of the oldest districts in the United States. Its traditional systems of schooling were created over two centuries ago. For many years, the city of Boston has implemented an "exam system" where students take a high school entrance exam in the 6th grade and the highest scoring students are offered seats in the three exam high schools, which focus in areas such as math or science. In the past, students who did not test well on this exam went on to one of Boston's traditional high schools. TechBoston Academy founders knew they did not want to create another exam school, selecting only the top-scoring students, but wanted to provide all students equal access to a rigorous and challenging education.

TECHBOSTON ACADEMY: ENGAGING ALL STUDENTS THROUGH TECHNOLOGY

Opening in fall 2001, TechBoston Academy uses young people's natural curiosities about technology to engage them in a college prep curriculum. The result is students that come to school

TABLE 2: 2003-04 SCHOOL PROFILE			
Asian	6%	Opening Date	2001
Black	53%	Enrollment	243
Hispanic	28%	Free/reduced Meals	85%
White	13%	Attendance Rate	94%
Other	13%		

more often, have fewer discipline issues, and post higher scores on academic achievement tests.¹⁵

TechBoston Academy offers a challenging technology-based education and raises awareness for all its students, specifically in engineering, computer science, and technology. Core subjects are closely interlinked with technology (using laptops, PDAs, scanners, video conferencing), preparing students for success outside of school and ensuring our nation's future in the high tech industry. The school has several key elements.

A Network of Schools

THE BOSTON PILOT SCHOOLS

Boston Public Schools (BPS) is one of the oldest districts in the United States. The Boston Pilot Schools project (Pilot Schools) was established in 1994 in an effort to develop schools within the public system that would meet the needs of students who were underserved. TechBoston Academy is part of the Pilot Schools network. While the Pilot Schools serve a student population generally representative of BPS, Pilot School students perform well on all available measures of student engagement and performance and are among the top-performing students of all BPS. Pilot Schools post dramatically higher rates of graduation and students planning to attend college than other high schools in the district.¹⁶

In a recent research study comparing the Pilot High Schools to BPS, preliminary data suggest the following differences, including:

- Pilot High Schools have lower retention rates and higher rates of students graduating high school than BPS.
- Pilot High Schools have a greater percentage of high school graduates planning to attend college than BPS.
- Three of the six Pilot High Schools had MCAS¹⁷ English/language arts and math scores in the top of all BPS, ranking them just below the three exam high schools.

An interdisciplinary curriculum focused on the core subject areas

TechBoston Academy has an interdisciplinary curriculum emphasizing English/language arts, math, science, and social studies. By using technology, these four core subjects are tied together to help students understand the connections and relevance in each and across all subjects.

TechBoston Academy students must take four years of science and four years of technology as a graduation requirement. Students take physics, biology, chemistry and pre-engineering for science. In addition, students may take introductory courses earning industry certifications in IT essentials such as Microsoft Office and Webmaster. Students in later grades can enroll in advanced technology courses, choosing from Cisco Networking, E-Commerce, Oracle Database Administration, Robotics, Advanced Digital Art, Advanced Web Development, and Entrepreneurship.¹⁸ Engaging these students in such advanced courses has resulted in TechBoston Academy taking 3rd in the National Robotics competition and 1st in the Massachusetts technology-based Stock Market Game.

Meeting the needs of all students

Unlike most traditional comprehensive high schools where students are tracked by perceived ability, all students at TechBoston Academy have the opportunity to take honors classes, regardless of their past performances on tests. Many regular classes are designed with supplemental assignments for those students who wish to try a class at an honors level but need additional support. TechBoston also offers Advanced Placement classes for students who excel academically.

Creating a supportive learning environment through research- and evidence-based education

According to leaders at TechBoston Academy, all decisions regarding the education of their students are research- and evidence-based. This is seen in the school's approach to retention. Last year, 15 students could have been retained based on their academic performance. However, Academy leaders knew that research data suggested that retaining students often leads to them dropping out of high school.¹⁹ Instead, Academy teachers and administrators, familiar with each student's needs, developed and had students and parents sign a contract detailing what was academically expected of the student throughout the year. During the summer, and throughout the school year, students worked intensively with staff to meet the academic demands of the contract. Thirteen of the 15 students completed the contract and passed on to the next grade.²⁰ All 13 of these students are now in honors classes.

PROFILE OF TECHBOSTON ACADEMY STUDENTS: A STUDENT BODY THAT REFLECTS THE COMMUNITY

TechBoston Academy first opened its doors in September 2001 with 75 9th graders. By 2004, the school housed 243 students spanning 9th-11th grades. Students are selected for admission based on a lottery system so that all students, regardless of their past academic performance, are eligible to enroll. In 2004, TechBoston Academy's waiting list was between 200-300 students.

The school's ethnic makeup is diverse and represents the community it serves (see Table 2). More than half of the students are Black. In addition, more than 85% of the students live below the poverty level. TechBoston Academy students' eagerness to learn

is partly demonstrated by the school's 94% attendance rate, compared to 88% for other students within the Boston Public Schools.

OUTCOMES: STUDENTS SHOW EARLY SIGNS OF ACADEMIC SUCCESS

Most students prefer a challenging and rigorous curriculum

Currently, approximately 80% of TechBoston Academy's students are taking honors classes.

Dramatic increase in reading scores

In fall 2002, the Scholastic Reading Inventory Assessment²¹ was administered to TechBoston Academy 9th graders to assess their reading abilities and develop reading strategies accordingly. Only 40% of these 9th graders were reading at grade level. When the test was re-administered in winter 2003, student reading scores increased dramatically — over 60% of the 9th graders were reading at grade level, a 50% increase in only four months.

Sustaining reading improvement gains

Again in 2002, another assessment, the Progress Toward Standards (PTS),²² was administered to the Academy's 9th graders in preparation for the MCAS state assessment. The baseline test score results suggested that many of the students were reading and performing math tasks far below grade level, with some as low as the 3rd-4th grade.

- ❖ In their first year as 9th graders, only 25% of these students scored at grade level in reading and only 12% scored at grade level in math on the PTS.

In reaction, teachers developed and implemented several targeted, long-term remediation strategies for improving reading and math skills. Strategies included extending the school

"Last year, a few students came to TechBoston with very low achievement levels. One boy in particular came to us with a 3rd grade reading level. He had a history of being disruptive, was often suspended and was expelled from seven different elementary and middle schools. He had an undiagnosed attention deficit and reading disorder, but somehow he came up through the system. While we took his past into consideration, we primarily focused on having him succeed. It took a while to gain his trust, but he came around. In the past, not only did he not pass the MCAS, but he often didn't even sit through the test. This year, this same student scored proficient in literacy and math on the MCAS. He's an example of the kids who can really excel here." < Mary Skipper, Headmaster/CEO >

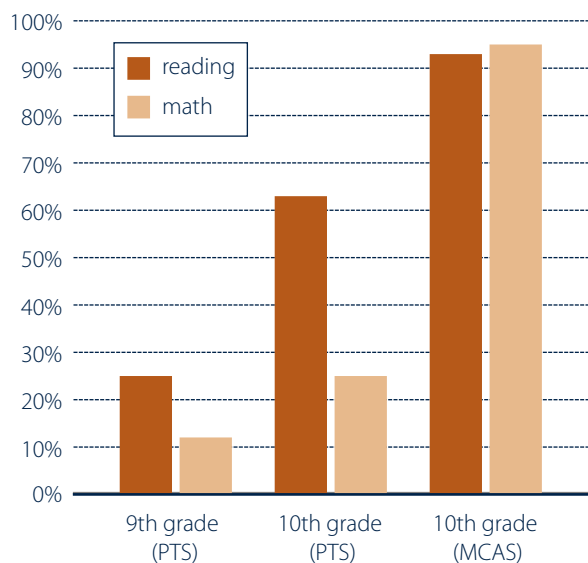
day by one hour for tutoring in small groups, developing key partnerships to support an intensive summer program specifically targeted in reading and math for all students reading below grade level, and using interdisciplinary units to enhance opportunities to learn and reinforce key concepts. Additionally, reading and literacy across the curriculum and mandatory homework halls for all students were introduced. One year later, these same students' reading and math scores on the PTS increased dramatically²³ (see Figure 3). For example:

- ❖ After implementing targeted strategies, 63% of these same students, as 10th graders, scored at grade level in reading and 25% scored at grade level in math.

These same students, again while 10th graders, took the MCAS and passed by 93% in English/language arts and 95% in math. More impressive, 50% of these students scored at the proficient level on the MCAS in both subjects.

TechBoston Academy's goal is for students to reach the 3rd or "Proficient" level on state assessments in all content areas where students demonstrate a solid understanding of challenging subject matter and solve a wide variety of problems.²⁴

**Figure 3: Student Assessment Scores (PTS and MCAS)
Class of 2006 Cohort (TechBoston)**





According to Academy administrators, BPS was not adequately preparing its students for college.²⁵ For example, a 2001 study found that only 34% of BPS high school graduates enrolled in a four-year college. In contrast, TechBoston Academy prepares its students to take both the PSAT and SAT college entrance examinations. This year, TechBoston Academy hired a college coach to work with the students and faculty to help students prepare for and gain information on higher education opportunities available to them.

THE THREE KEYS TO TECHBOSTON ACADEMY'S SUCCESS: PERSONALIZATION, AUTONOMY, AND PARTNERSHIPS

Leaders at TechBoston attribute three key elements that drive their school's success: personalization, autonomous status as a Pilot School, and community partnerships.

Personalization makes a difference

TechBoston Academy's small size and low teacher to student ratio (1:7) allow for personalized instruction. Teachers consider every student in the building, not just those in their classrooms, "my student." A high sense of collegiality exists among the teachers, and students and teachers alike share a mutual

respect. Teachers have built an open culture where they can ask one another for help.

Autonomous status as a pilot school

TechBoston Academy has autonomy over its staff selection, development of curriculum, and scheduling. For example, this flexibility has allowed faculty to schedule time to meet as a group twice per month. Additionally, staff are paired with students through high school, thus creating a stronger sense of community and greater individualized instruction for students.

Partnerships with the community

Key partnerships with some of Boston's top universities and organizations and the high tech industry help support students to stay focused and stay in school. Most notably is TechBoston Academy's involvement in the Model Secondary Schools Project, an intermediary organization that creates new small secondary schools in urban districts nationwide and infuses technology and project-based learning into the curriculum. In addition, administrators cite the financial and technological support from General Dynamics Networking, the Digital Bridge Foundation, IBM, and Dell as being critical to their success.

Dayton Early Col



DAYTON, OHIO

Dayton Early College Academy

AN EARLY COLLEGE HIGH SCHOOL FOR UNDERSERVED STUDENTS

"DECA sets higher expectations for the students and they are rising to the challenge." < Timothy Nealon, Principal >

PROVIDING UNDERSERVED HIGH SCHOOL STUDENTS ACCESS TO COLLEGE

Only 51% of all Black students nationwide graduate from high school. Only 20% of them leave high school college ready.²⁶ Dayton, Ohio is no exception. Further, a large majority of Dayton's students live in poverty, making them among the least likely to graduate from high school, much less go on to college.²⁷ Ohio's elementary and middle charter schools and the Dayton community wanted to change this. The University of Dayton, the Dayton Public School District, and key education leaders created Dayton Early College Academy – a small, personalized high school where students are well on their way to earning both a high school diploma and up to two years of college credit toward a bachelor's degree.

ENGAGING STUDENTS IN ACTIVE LEARNING WHILE PREPARING THEM FOR COLLEGE

Since opening its doors in fall 2003, Dayton Early College Academy (DECA) has integrated a rigorous course of study for its students. The school is accountable for all testing and bench-

TABLE 3: 2003-04 SCHOOL PROFILE

Black	82%	Opening Date	2003
White	12%	Enrollment	95
Other	6%	Free/reduced Meals	73%
		Attendance Rate	93%

marks as required by the state and district, and its curriculum is closely tied to Ohio state content standards. DECA administrators report that by 2007, the school's first graduating class will have met both the state of Ohio and University of Dayton's performance and competency standards and will be well-positioned to finish the remaining requirements for a bachelor's degree – an achievement that defies national statistics. A large majority of these students will be the first generation in their family to attend college.

DECA fully engages students through active learning. Staff identify each student's interests, strengths, and needs through an initial home visit, ultimately creating a personalized learning plan. Each plan includes specific goals and strategies that

A Network of Schools

EARLY COLLEGE HIGH SCHOOLS

Early College High Schools are small, independent schools that provide high school academic content along with access to college classes. Students can achieve two years of college credits toward a bachelor's degree while they earn their high school diploma. These schools are primarily designed for students who are generally underrepresented in postsecondary education – students from low-income families, students of color, and English language learners. Bard High School Early College (BHSEC) was the first school to implement the Early College High School model. BHSEC was founded in June 2001 on the belief that many young people are academically and socially prepared to do serious college work at age 16. The unique curriculum enables highly motivated students to gain credit for two years of college, earning an associate of arts degree as well as a high school diploma. While BHSEC's students come from many different backgrounds, all have a strong record of academic excellence and commitment to learning.

As of 2004, there are 50 Early College High Schools in 20 states. It is projected that by 2012, 166 such schools will serve over 56,000 students nationwide.²⁸

build on the student's strengths and interests and identifies skill gaps that need to be addressed. In addition, students work in small groups along with their four content area teachers throughout the year. The individualized student focus and faculty support allow high school academic content to be compressed into a shorter period of time, making early access to college-level classes a reality.

PROFILE OF DAYTON EARLY COLLEGE ACADEMY STUDENTS: COMMITTED TO LEARNING

Eighty-two percent of DECA's students are Black and over 73% live below the poverty level. DECA does not screen or accept students on the basis of their grade point average (GPA) or prior grades, but on their commitment and passion to learning, including students with special needs. DECA also considers students who are English language learners and who have the potential to be the first generation in their family to attend college. DECA leaders do not "cherry pick" the highest performing students from the district; rather, they are most interested in drawing students who have the potential to learn, but often do not have the opportunity to learn. DECA gives them that opportunity.

In 2003, its first year of operation, DECA housed 95 9th graders and had a waiting list of over 200 students. This year, DECA expanded to 10th grade and will add 11th and 12th grades in subsequent years with the anticipated goal of 400 students enrolled after four years of operation.

DECA's unique partnership with the University of Dayton and Sinclair Community College provides many high school students access to college classes and the support necessary to

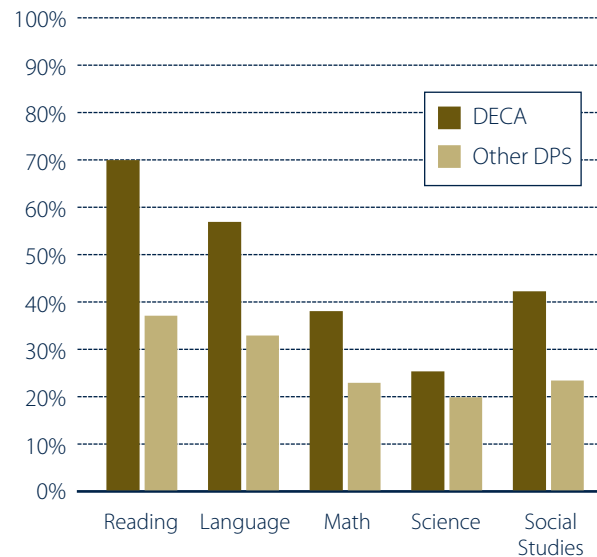
succeed. During the first year of operation, DECA tested all 95 9th graders to determine their academic preparedness for college-level classes. Nineteen of these freshman students (20%) – with some students as young as 14 years old – were eligible to take college-level classes. Initially, some students were intimidated by the experience since the college and university campuses were not ethnically diverse. However, DECA staff provided the support necessary and helped build confidence in their students. The students received full tuition waivers and many received additional academic support through college-level tutors. Approximately 20% of DECA students have taken and received credits for various college and university classes, ranging from English composition I & II to algorithms and programming to finite mathematics. While most students took only one class at a time, some students took two.²⁹

OUTCOMES: DAYTON EARLY COLLEGE ACADEMY STUDENTS OUTPERFORM THEIR COUNTERPARTS

Preliminary data suggest that DECA 9th graders outperformed their Dayton Public School District (DPS) counterparts in all five components (reading, language, math, science, and social studies) of the Terra Nova, a state-mandated achievement test. For example:

- ❖ More than 70% of DECA students scored over the 50th percentile in reading compared to only 37% of DPS students, and
- ❖ More than 57% of DECA students scored over the 50th percentile in language compared to only 33% of DPS students. (See Figure 4.)

Figure 4: Percent of 9th Graders Scoring Over 50th Percentile - Terra Nova, Spring 2004



THE THREE KEYS TO DAYTON EARLY COLLEGE ACADEMY'S SUCCESS

A unique philosophy, autonomy and flexibility, and leadership are seen as key to DECA's academic success.

Unique philosophy with a strong advisory structure

The most important factor leaders identified as key to DECA's success is the personalized accelerated academic program guided by each student's personalized learning plan (PLP). Prior to the start of the school year, every DECA student receives a home visit from a pair of teachers. One teacher described the home visits as "a very soulful experience for everyone." Teachers in general consider it to be the biggest growing

A fourteen-year-old student came to us with limited science experience, but he expressed an interest in physics. He didn't have much of a science background so I suggested he start with general science first. But he insisted he wanted to give physics a try. The physics department chair at the University of Dayton agreed to interview him and decided he could try his class. It wasn't easy for him at first, but he took advantage of every tutoring opportunity available to him. Well, he graduated the class with a B. This is a student whose past grades were Cs and Ds in lower-level classes, but he had the heart and determination, which made him exactly the kind of student we were looking for." < Timothy Nealon, Principal >

experience for the students, staff, and parents/guardians. Teachers and parents/guardians discuss the goals, strengths, and weaknesses of each student. This unique endeavor is the start of each student's PLP. Meetings to discuss each student's PLP are held throughout the year to track student learning and to develop new goals.

Autonomy and flexibility from a traditional setting

Developers of DECA set out to create a "best-practices" high school in an urban setting for students who were not achieving academically in traditional high schools. Parents wanted to ensure their students were prepared for college. The Dayton Public School District did not have the capacity, resources, or ability to launch such a unique Early College High School model. However, with the assistance and support of the University of Dayton and KnowledgeWorks, the dream became a reality. The

district and the education association gave DECA the autonomy and flexibility necessary and allowed them to create a unique governance structure accountable to a board of directors. In addition, a waiver on work and hiring rules allows for the hiring of the right people for such an alternative, Early College High School design.

Leadership and support of DECA developers and staff

Everyone is a leader at DECA. The shift from a top-down leadership style has created a sense of accountability and ownership schoolwide, and has fostered a close-knit environment for both staff and students. Teachers work collaboratively to reach all students. Administrative decisions are made by those who are most impacted by the end result. This shift in leadership creates a more balanced environment where every school member has input in decisions related to his or her work.



St. Northtown



CHICAGO, ILLINOIS

CCS Northtown Academy Campus

LINKING INSTRUCTION TO STUDENT ASSESSMENT

"When you provide a purposeful curriculum related to what you are tested on, students will achieve." < Charles Venegoni, Civitas Schools President³⁰ >

BUILDING A SCHOOL SPECIFICALLY DESIGNED TO PREPARE STUDENTS FOR COLLEGE

With 437,000 students and over 600 schools, the Chicago Public School District (CPS) is the third largest school system in the country. Nearly 90% of the students are students of color and nearly 85% are classified as low income. For years, the dropout rates for Chicago inner-city high school students has been staggering: Only 42% of Blacks and 50% of Hispanics were graduating from high school.³¹ A recent study by researchers at Johns Hopkins University found that half of Chicago public high schools are graduating fewer than 50% of its incoming freshmen in four years.³² To break this cycle of failure, CPS, in collaboration with several foundations, began developing new smaller schools and redesigning some existing schools. One of these new schools is the Chicago International Charter School-Northtown Academy Campus (Northtown Academy). Within its first year of operation, 100% of all Northtown Academy's seniors applied to college, 83% were accepted, and 11% received merit-based scholarships.

TABLE 4: 2003-04 SCHOOL PROFILE

Asian	11%	Opening Date	2003
Black	12%	Enrollment	450
Hispanic	43%	Free/reduced Meals	36%
White	34%	Attendance Rate	95%

KEY ATTRIBUTE OF NORTHTOWN ACADEMY: INTEGRATED AND ENGAGING CURRICULUM

Emphasizing a focused instruction

Located on Chicago's Northwest Side, Northtown Academy delivers advanced instruction emphasizing a college preparatory education. Teachers meet across subject matters and grade levels 9-12 to discuss their content and each student's progress, and to create sequenced alignment among all classes. This regular communication among staff allows for the continuous monitoring of student growth and needs, and thus encourages student movement from a lower skill level to a higher skill level.

A Network of Schools

THE CIVITAS MODEL

Northtown Academy is founded on the principles of Civitas, a charter school management organization in urban Chicago. The curriculum offers students a college preparatory education relating key cognitive skills to academic content. The Civitas model was first implemented at John Hersey High School in Arlington Heights, Illinois³³ in fall 2000. By 2004, just four years after the Civitas model was introduced, the school, described as “middle class,” ranked number one in its district in three out of the five subject areas.³⁴ While the school is predominately white (82%), the performance of Hersey’s Hispanic population is notable.³⁵ As incoming freshmen, a majority of the Hispanic students in the class of 2004 tested approximately two years below grade level. Their scores on the 2003 Prairie State Achievement Exam showed impressive gains. The Hispanic students met or exceeded the state average in Illinois in four out of the five academic categories on this state assessment.

PROFILE OF NORTHTOWN ACADEMY STUDENTS: BUILDING A DIVERSE STUDENT BODY

Northtown is working on building its school to reflect the diversity of its community. The Academy started its first year with 450 students, a majority of whom were freshmen (200), sophomore students (115), and new applicants to the school. The majority of juniors and seniors attended the school formerly housed at this site.³⁶ In its first year, Northtown attracted a more diverse population in its freshmen and sophomore classes. For example, 14% of the freshmen class are Black whereas less than 2% of the juniors and seniors are Black.

The school represents diverse ethnic, socioeconomic backgrounds, and reflects the diversity of its community. For the 2003–04 school year, approximately 43% of the students were Hispanic, 34% White, 12% Black, and 11% Asian/Pacific Islander/Filipino (see Table 4). In addition, students entering Northtown Academy last year represented a range of academic abilities. Approximately one third of all students new to Northtown entered reading three years below their grade level.

Changing the culture

Although Northtown had a high number of suspensions (85) and expulsions (5) in its first year, the school expects to see these numbers drop over the next few years. According to school staff, students in the first year of the Academy were “testing the waters,” unclear of what they could and could not get away with. Staff were particularly vigilant about citing infractions of the school’s code in order to establish a safe learning environment for all of its students.

The Northtown student selection process

As a charter school, all students are entitled to apply to Northtown Academy, and no student can be denied admission based on availability. Northtown Academy's application rate increased significantly for its second year of operation and now has more than 100 students on the waiting list. The school draws applicants from middle school charters that are part of the Chicago International Charter School group as well as from the local public schools.

OUTCOMES: STUDENTS SHOW GREAT PROMISE IN ACHIEVEMENT

Students enrolled in rigorous coursework

All students can select a class for either academic credit or honors credit and two advanced placement (AP) courses – calculus and statistics – are available to students. The school plans to increase the number of AP courses available. Students are offered a range of traditional subjects as well as specialty courses. For example, to serve the large number of Spanish-speaking students, native-level Spanish courses are offered. In addition, multimedia and communications and science and technology are available to students.

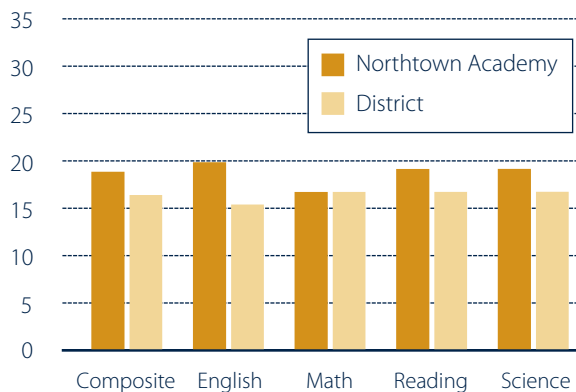
Promising student results to date

Student achievement data suggest students will outperform other charter schools in Illinois.

- ❖ Despite Northtown Academy's diverse education and socioeconomic population, by the end of its first year of operation, freshmen test scores on the Educational Planning and Assessment System (EPAS) PLAN³⁷ test were the highest of any charter school in Chicago.³⁸

- ❖ Northtown Academy juniors scored an average of 19.1, out of a possible score of 36, on the ACT test, making them the highest-performing junior class of any Chicago open-admission school. (See Figure 5.)
- ❖ One hundred percent of all seniors applied to college, 83% were accepted, and 11% received merit-based scholarships.

**Figure 5: ACT Assessment for Class of 2005
as Compared to District Averages**



Northtown Academy was designed to develop a high level of maturity and communication between students and the faculty and students and their parents. For example, at a recent parent conference, students were asked to share what they were learning in school. The students were picked at random and asked to speak extemporaneously. One student talked about how for the first time she was engaging in substantive conversations with her parents that were of critical importance in society. Although the topics were controversial (e.g., capital punishment), this student was mature enough to engage in a thoughtful conversation that provoked rich discussion. She was excited by what she was learning and eager to share these thoughts with her parents. Other parents in the meeting agreed that they, too, were now having meaningful conversations with their children.” < Megan Quaile, Civitas Schools CEO >

THE THREE KEYS TO NORTHTOWN ACADEMY'S SUCCESS: CURRICULAR VISION, ORGANIZATIONAL STRUCTURES, AND FACULTY AND STAFF

Leaders at Northtown Academy attribute three key elements that drive their school's success: an articulated curricular vision, organizational structures and policies, and a strong faculty and staff.

Articulated curricular vision

School leaders believe the school was able to “hit the ground running” in its first year because the school began with a clearly stated curricular vision that includes standards for academic achievement and benchmarks for measuring success. One staff member, who echoed the sentiments of others, indicated the “design-based model informed our mission to provide rigor, relevance, and relationships to all students who chose our school.” By having this key component in place, staff felt they could focus more on other issues that were not as well developed, such as integrating and transitioning students from the prior school facility into the new setting.

Clear organizational structures and policies

School leaders unanimously agreed that the organizational structures and policies (e.g., behavioral policies) helped guide the school in its first year of operation and set a clear understanding for students and the community about the school's intended learning environment.

Strong and dedicated faculty and staff

Regarding Northtown Academy faculty and staff, one school leader said it best: “As a new school, we had the opportunity to hire a highly skilled faculty and staff who embraced the school's mission and values. . . We engage students in a serious curriculum that takes on the kinds of content you would see in ‘better’ schools. Our curriculum has an emphasis on argumentation, controversy, and conflicting ways of seeing things which provides a critical thinking dimension to study.” (Charles Venegoni, Civitas Schools President)



St. Ignace Jesuit



DENVER, COLORADO

Arrupe Jesuit High School

A COLLEGE PREP HIGH SCHOOL WITH A STRONG WORK STUDY COMPONENT

"Initially, the corporate work study component was thought of as a funding vehicle for students, but it has become so much more."

< Michael O'Hagan, Principal >

A NONTRADITIONAL, FAITH-BASED SCHOOL FOR DENVER'S INNER-CITY YOUTH

The city of Denver once boasted more than 12 Catholic high schools, each providing an opportunity for inner-city students living in poverty to participate in a parochial education supporting both faith and academics. In recent years, most of these schools have closed due to insufficient funds and declining enrollment. Schools that remained open were on the outskirts of the city – out of reach to many of the inner-city students who needed them most. Things changed in 2003 when Arrupe Jesuit High School opened its doors in the heart of Denver. The city's predominantly Hispanic inner-city youth now have access to a school that not only fosters academic excellence, but prepares them for success in the professional world.

KEY ATTRIBUTE OF ARRUPÉ: A WORK-STUDY PROGRAM PROVIDES A DUAL INTEREST FOR STUDENTS

Arrupe Jesuit High School fosters a faith-based atmosphere designed to help low-income students prepare for both college

TABLE 5 : 2003-04 SCHOOL PROFILE			
Black	3%	Opening Date	2003
Hispanic	86%	Enrollment	65
White	10%	Free/reduced Meals	53%
Other	1%	Attendance Rate	93%

and work. A central component is the Corporate Work-Study Program, which requires students to work one day each week in an entry-level corporate position (e.g., training to be a nurse's assistant in a clinic, working at a bank). Through this work, students earn approximately 70% of their tuition and gain invaluable insight into their own possible future. Students also receive tuition assistance from foundations, organizations, and from Arrupe's own Tuition Assistance Program. Arrupe has partnered with 17 corporate sponsors and continues to add sponsors.

A Network of Schools

THE CRISTO REY NETWORK

The Cristo Rey Network provides a Catholic, college preparatory education to students from low-income families. Schools in the Network are characterized by a work-study component used to help finance students' education as well as provide real-life work experiences that relate to in-class learning. The Network builds and maintains relationships with several local corporations. These corporations provide paid internships to students. Nearly 90% of these corporations renew their sponsorship every year.

The Cristo Rey Network has 11 sites nationwide. As of this academic school year, 520 students are enrolled at these sites, 92% of whom live below the poverty line. On average, the dropout rate at a Cristo Rey school is 1%, the graduation rate is 93%, and the attendance rate is 98%. These averages far surpass schools in comparison sites. For example, Community High School in Chicago's inner city has a dropout rate of 24%, a graduation rate of 61%, and an attendance rate of 85%.³⁹

The Cristo Rey Network boasts 390 graduates and a 100% college acceptance rate for the class of 2004.

PROFILE OF ARRUPÉ JESUIT HIGH SCHOOL STUDENTS: SERVING A PREDOMINATELY HISPANIC COMMUNITY

Since its inception in 2003 with 65 9th grade students, Arrupe has expanded to 10th grade for the 2004-05 school year. Similar to the demographics of the surrounding community, Arrupe's students are predominantly Hispanic (see Table 5) and over 80% live in poverty.

Student selection process

Arrupe uses the formal admittance model used by Catholic high schools. Each student who applies must submit a writing sample,⁴⁰ recommendations from grammar school teachers, report cards, and middle school assessments (i.e., CSAP (Colorado Student Assessment Program) from public schools, Iowa Test of Basic Skills from Catholic schools). School administrators then interview prospective students and their parents/legal guardians. Verbal and written communication skills are critical due to Arrupe's work-study component. Of 120 applicants, 65 were accepted in the first year. Although Arrupe implements selection criteria, students are purposefully selected based on economic need. The mission of Denver's first Catholic high schools was to provide inner-city students a quality, faith-based education — a goal Arrupe strives to achieve today.

OUTCOMES: ENGAGED STUDENTS ON THE PATH TO COLLEGE

Although Arrupe has only been in existence one year, its students are already showing signs of strong commitment to their new school. Per 2003–04 data:

- ❖ Arrupe's student attendance rate was 93% compared to 87% for the Denver City Public School District.
- ❖ Arrupe's student suspension rate was 3%, compared to 17% for the district.

Gearing up to measure success

Last year Arrupe administered the Iowa Test of Educational Development (TED) to all students and will continue testing each year to have a common point of reference for the school's standardized testing. The school captured "baseline data," which it will use in subsequent years to measure its progress. Arrupe will also administer the PSAT, SAT, and ACT assessments to students.

Arrupe is also capturing data on students' job performance. Employers are asked to conduct a formal evaluation of students twice per year. For the two semesters where data are available, employers ranked approximately 70% of the work study students as "Outstanding" or "Very Good." Arrupe started in 2003 with 17 work study businesses and an additional 21 companies have signed on for year two for a total of 37 companies.⁴¹

Strength in faith

Arrupe prides itself on being a faith-based school with a strong social component. Arrupe wants its students to not only excel academically, but to also grow and excel as people. Staff serve not as formidable authorities but as models for students to

emulate. Many students live in areas plagued by gangs, violence, and crime. Arrupe serves as a haven from these urban problems, providing students with security and support. As a result, Arrupe has a low percentage of discipline issues. School leaders attribute this to clear rules and expectations for the students and promoting pride and ownership in their education and their surroundings. The school remains spotlessly clean, ordered, and safe – and the students like keeping it that way.

THE THREE KEYS TO ARRUPE'S SUCCESS

Arrupe leaders cite the strength of the Cristo Rey model (see sidebar), partnerships with businesses and the community, and the students as key factors contributing to their success.

A strong foundation from which to grow

Since the Cristo Rey model had already been successfully implemented in 11 sites throughout the United States, Arrupe leaders were not faced with the challenge – and subsequent uncertainty – of designing a new program. Rather, they took the central elements of the Cristo Rey model – college preparatory, faith/value-based, and corporate work-study program – and tailored them to the needs of Denver's inner-city students.

Community and business support

Arrupe Jesuit High School has created excellent partnerships among its students, the community, and the private sector. The corporate sponsors who employ Arrupe students not only offer financial support but also have invested themselves and the resources of their businesses to support the students' development. Teachers regard student learning as their main priority



"We had a young woman, from a Spanish-speaking home, come to Arrupe last year. She had come from a school where she was not succeeding. She struggled the first month here, but eventually stayed after every class and attended study hall every evening after school. She took full advantage of the school's 'healthy revision policy' and took every opportunity to improve her work. Once her grades improved, she set her goals even higher and still attended study hall and help sessions to improve more. She now is excelling academically and has received some of the highest job sponsor reviews. Once a shy student, she has blossomed into a confident and helpful student with excellent grades." < Michael O'Hagan, Principal >

and they work constantly to develop an effective curriculum. Arrupe staff and students work with several nonprofits within the work-study program including a dual-language grade school, a radio station, and a research agency.

Committed students

Leaders stated that the students themselves are the most impressive contributors to their own success. Freshmen entered a new school offering a distinctive program. A year later, students were more prepared for both an increased academic load and the responsibilities of a part-time job. For many, this was

the first time they were required to perform at a high academic level. As well, this was the first time many students were exposed to or worked in an adult environment where their performance was measured according to objective standards set by a supervisor. And, for many, it was the first time they could place their classroom studies in the context of a work setting and see what they could earn for themselves through their education. This has created more motivated students focused on using their high school education to prepare them for college and to be responsible citizens.



High Tech High



SAN DIEGO, CALIFORNIA

High Tech High School

BUILDING ON A TRIAD OF CULTURE, STRUCTURE, AND ACADEMICS

"This is a school where things are not done to students; this is a school where students do things." < Larry Rosenstock, Founding Principal >

HIGH TECH HIGH: NOT YOUR TRADITIONAL HIGH SCHOOL

Industry and education civic leaders in downtown San Diego were frustrated. Students in the area leaving high school and college were not well prepared to enter the community's burgeoning high-technology workforce. In 2000, civic leaders sought to change that by developing an innovative charter high school that would meet the needs and demands of these new industries. Now, just four years later, the High Tech High Charter School ranks in the top 10% of all California public high schools.⁴²

KEY ATTRIBUTE OF HIGH TECH HIGH: LEARNING THROUGH ACTION

San Diego Unified School District's High Tech High provides a rigorous education in a nontraditional environment. Specialized state-of-the-art labs take the place of traditional classrooms, and student workstations with Internet-ready computers are available to students three hours a day. Students' schedules are divided into one morning and one afternoon block each day, allowing them to delve deeply into their studies. Further,

TABLE 6: 2003-04 SCHOOL PROFILE

Asian	16%	Opening Date	2000
Black	16%	Enrollment	465
Hispanic	17%	Free/reduced Meals	11%
White	50%	Attendance Rate	96%
Other	1%		

teams of two to three teachers teach groups of 40-60 students, creating a small, supportive learning community. Teachers guide their student groups through a project-based approach to learning: to learn history, students make a film about Gettysburg; for science, they hold a public debate on evolution; for business, they'll write a plan for a biotech start up. In addition, junior and senior high students enter internships with local businesses that match their interests and skills, linking schoolwork to the working world.

A Network of Schools

THE HIGH TECH HIGH MODEL

Moving against a tide of skepticism regarding charter schools,⁴³ High Tech High is beating the odds and is supporting its students with four years of an intense academic experience. The school is building a community of college-bound seniors. In just four years, the school has ranked in the top 10% of all California high schools. This school – both different in its physical structure as well as its education philosophy — is now replicating itself in several states. To date, there are 10 schools in the High Tech High Network, five in California and several in Arizona and Illinois. Each of these sites has fewer than 500 students and offers a more narrowly focused curriculum than the traditional seven classes a day. Students select projects based on their own personal interest and engage in cross-curricular experiences designed to teach them skills and abilities for higher education. Students learn in nontraditional settings designed specifically for them by architects employed by the Network.

High Tech High incorporates three key design principles

- ❖ Personalization with a student-to-teacher ratio of less than 20:1. In addition, each student works with an advisor who remains constant during the student's four years at High Tech High. Student and advisor meet weekly to discuss personal and academic achievement.
- ❖ Real World Projects that enable students to learn while working on problems of interest and concern to adults in the community.
- ❖ Common intellectual mission using an engaging and rigorous curriculum that provides the foundation for entry and success at postsecondary institutions nationwide.

In 2000, its first year of operation, High Tech High served 198 students. Today, it serves over 450 students and ranks in the top 10% of all California public high schools, based on Academic Performance Index scores.⁴⁴

While High Tech High's ethnic diversity mirrors the community it serves (see Table 6), it continuously strives to increase the number of underrepresented students in math and engineering who succeed in high school, postsecondary education, and San Diego's high tech industry. In addition, 65% of High Tech High students entering college were the first in their families to attend a postsecondary school.

In the 2003-2004 school year, students boasted a 96% attendance rate, and no record of truancies or expulsions. Only two incidences of vandalism were reported, and only three students were suspended for minor infractions.

PROFILE OF HIGH TECH HIGH STUDENTS: DIVERSITY THAT MIRRORS THE COMMUNITY

The High Tech High student selection process

As a charter school, all students are entitled to apply to High Tech High, and no student can be denied admission based on availability. Four hundred students applied for 100 slots for the school's 2003–2004 school year. Since so many students apply to High Tech High and there are no provisions in the state of California to ensure equal representation,⁴⁵ High Tech High developed its own system to ensure that students would reflect the surrounding community. Therefore, the school runs its selection lottery based on zip codes, thus ensuring a more equal representation of the community's demographic population.⁴⁶

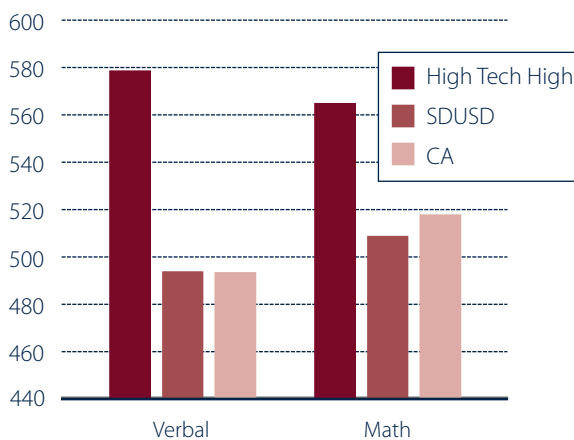
OUTCOMES: HIGH TECH HIGH STUDENTS OUTPERFORM THEIR COUNTERPARTS

Student achievement data suggest that High Tech High students outperform the district, state, and national averages.

- ❖ In 2003, High Tech High's Academic Performance Index (API) was 802, exceeding the state's performance target of 800 and exceeding San Diego Unified School District's score of 697. Based on its API score, High Tech High is ranked in the top 10% of all public high schools in California.
- ❖ One hundred percent of all High Tech High 2004 seniors applied to college and all were accepted, even though fewer than half of these students have college-educated parents. Eighty percent of college-bound seniors attended four-year institutions.

- ❖ Ten percent of High Tech High students receive merit-based scholarships.
- ❖ While few California students take the ACT⁴⁷ college entrance exam, High Tech High students who took the test received a composite score of 23.9 out of a possible total score of 36, nearly two points higher than San Diego Unified School District (20.8) and California (21.3). This difference is significant since students are tested in the four core academic areas: English, math, reading, and science.
- ❖ High Tech High students who took the SAT college entrance exam scored an average of 85 points higher on the verbal component and 54 points higher on the math component than the district average (see Figure 6).

Figure 6: Average SAT Scores for High Tech High, SDUSD, and CA, Spring 2004



"I have a kid who got into Stanford early admissions as a junior a year and a half ago. He was here a few weeks ago with other former students — one is now at Chico State, one is at Berkeley — and I asked, 'Is there anything different about the way you were prepared and the way they (students in traditional high schools) were prepared?' And what we are hearing from them is that they were already at college when they were here. The other kids in their dorms had a harder transition than they did. They had long-term projects which were due in the future, they had to manage their time in certain ways, the level of discourse in classes was more elevated, and the expectation was a lot higher. The sense that this was a place where everyone was going to take their work seriously was much more evolved for them than students who attended traditional high schools." < Larry Rosenstock, Founding Principal >

- ❖ Ninety-five percent of High Tech High students take the SAT exam as compared to 49% of students from the district and only 37% from the state.

THE THREE KEYS TO HIGH TECH HIGH'S SUCCESS

Leaders at High Tech High attribute three key elements that drive their school's success: faculty and staff, design principles, and charter status.

Outstanding faculty and staff

Focusing on project-based learning, High Tech High must have highly motivated and inspirational teachers to work with students of all achievement levels. The school's teachers are a mix of master teachers, new teachers, and industry professionals. Teachers meet every weekday morning for various professional development meetings (e.g., reviewing student work together). Teachers work on teams and are accountable to these teams.

Design principles

High Tech High is centered around three key design principles: adult-world connection, common intellectual mission, and personalization. These three elements work together to support student learning and preparation for college.

Charter status

High Tech High is a public, nonprofit charter school chartered by San Diego Unified School District. High Tech High is fortunate to have a nimble charter status over the school's finances, facility, and academic program. The school uses the flexibility with its charter to introduce innovative structures and instructional practices to enhance student learning.



Appendix

SITE SELECTION METHODS AND DATA COLLECTION

WestEd initially examined 12 sites across the country – all pre-selected by the Foundation – that have opened in the last 1–3 years and were likely to have access to data documenting their levels of achievement upon entry as well as, if possible, longitudinal data on students' behavior and achievement.⁴⁸ The sites were also chosen to reflect a geographic spread and included both inner-city and rural sites. From this group of twelve, five schools were selected that in large part represented the variety of high school models in the Foundation's larger portfolio of school investments. The five schools were also selected based on geographic locale representing a national spread. Although we attempted to include a combination of rural and inner-city sites, all five schools are located in inner cities. One site, in spite of lacking data, was included specifically because it was not part of the public school system. Of the five sites, three are charter schools, one is a self-reported pilot school, and one site is affiliated with the Catholic Dioceses.

WestEd examined data for the 2003–04 school year from these schools, including documents pertaining to students' demographic makeup as well as behavioral (e.g., student attendance rates, suspensions, expulsions) and academic performance. WestEd also administered a school survey and conducted an interview with each site's principal. Survey data were put into a database and used in the development of interview protocols. Interviews were taped and selectively transcribed for use with this study. The findings in this report should be used as benchmarks for future work that continues as these high schools work to offer students a rigorous environment preparing them for higher learning.

Notes

1. Orfield, G., Losen, D., Wald, J., & Swanson, C.B. (2004). *Losing our future: How minority youth are being left behind by the graduation rate crisis*. Cambridge, MA: The Civil Rights Project at Harvard University. Contributors: Advocates for Children of New York, The Civil Society Institute.
2. Ibid.
3. College-ready data from Greene, J.P., & Foster, G. (2003). *Public high school graduation and college readiness rates in the United States*. New York: Center for Civic Innovation at the Manhattan Institute.
4. Cotton, K. (2001). *New small learning communities: Findings from recent literature*. Portland, OR: Northwest Regional Educational Laboratory.
5. In one instance of which we are aware, the Foundation is funding a non-public effort, the Cristo Rey Model, which is responsible for 11 sites across the United States.
6. Schools are funded through intermediaries such as external support agencies and 501C3s attached to the district.
7. The American Institutes for Research and SRI International have been funded by the Bill & Melinda Gates Foundation to design and implement an eight-year evaluation of the National School District and Network Grants Program. The evaluation is currently underway. Interim reports are available at www.gatesfoundation.org.
8. For a more complete description of the methods used for this pilot study, see Appendix.
9. Frameworks characterized as “theme-based” organize coursework around a theme, and a “traditional” framework teaches the traditional subjects with the emphasis on preparing every student for college. These definitions are adapted from the Gates Foundation. For more information on different frameworks, visit www.gatesfoundation.org/Education/RelatedInfo/Great_High_Schools.html.
10. WestEd has data that supports this fact from all sites except for Arrupe Jesuit High School.
11. Refer to specific cases for High Tech High and TechBoston Academy.
12. According to Illinois State Board of Education School Report Card numbers, the average Prairie State test score for junior students in charter schools is less than 16 points on a 36-point scale. Northtown Academy freshmen scored on average 16.5 points on a 32-point scale.
13. College application rates in San Diego Unified School District and Chicago Public Schools could not be verified. Chicago's graduation rate is presented first followed by San Diego's.
14. See for example, Fullan, M. (2001). *The new meaning of educational change* (3rd ed.). New York: Teachers College Press.
15. Tung, R., Ouimette, M., & Feldman, J. (2004, March). *How are Boston Pilot School students faring? Student demographics, engagement, and performance 1998–2003*. Boston: Center for Collaborative Education.
16. Ibid.
17. Massachusetts Comprehensive Assessment System (MCAS) is a state-mandated assessment.

18. Information provided by *TechBoston Academy school report card: A report on teaching and learning* (2003, December).
19. Jimerson, S., Ferguson, P., Whipple, A., & Anderson, G. (2002). Exploring the association between grade retention and dropout: A longitudinal study examining socio-emotional, behavioral, and achievement characteristics of retained students. *The California School Psychologist*, 7, 51-62.
20. The two students who did not meet the demand of the contract had been retained twice in elementary school. TechBoston Academy administrators recommended they be placed in an alternative high school setting.
21. Scholastic Reading Inventory Assessment (SRI) is a computer-adaptive reading assessment.
22. The Progress Toward Standards Assessment (PTS) is scored the same as the Massachusetts Comprehensive Assessment System (MCAS).
23. Assessment details provided by TechBoston Academy administrators.
24. Definition of "Proficient" from the Massachusetts Comprehensive Assessment System (MCAS).
25. Tung, R., Ouimette, M., & Feldman, J. (2004, March). *How are Boston Pilot School students faring? Student demographics, engagement, and performance 1998-2003*. Boston: Center for Collaborative Education.
26. Greene, J.P., & Forster, G. (2003, September). *Public high school graduation and college readiness rates in the United States*. New York: Center for Civic Innovation at the Manhattan Institute.
27. Ibid.
28. Information from Jobs for the Future (www.jff.org).
29. Information from KnowledgeWorks, Dayton Early College Academy's intermediary.
30. Civitas is the intermediary support for Northtown Academy. Based on a curricular model, Civitas is a college preparatory education model relating key cognitive skills to academic content.
31. Orfield, G., Losen, D., Wald, J., & Swanson, C.B. (2004). *Losing our future: How minority youth are being left behind by the graduation rate crisis*. Cambridge, MA: The Civil Rights Project at Harvard.
32. Balfanz, R., & Legters, N. (2004, June). *Locating the dropout crisis*. Baltimore, MD: Center for Social Organization of Schools, Johns Hopkins University.
33. Illinois District 214.
34. Hersey students outranked their district peers in reading, math, and writing based on data from the Prairie State Achievement Exam.
35. Less than 10% of Hersey High's students are Hispanic. Data taken from the Illinois State Board of Education School Report Card 2003.
36. All students at Good Counsel High School who wanted to attend the Chicago International Charter School Northtown Academy Campus applied through the standard lottery process.
37. The PLAN is a pre-ACT test given to tenth graders in preparation for taking the ACT, a test used as a possible criterion for college entrance. The SAT is the other test students take for application to college.
38. According to Illinois State Board of Education School Report Card numbers, the average Prairie State test score for juniors in charter schools is less than 16 points on a 36-point scale. Northtown Academy freshmen scored on average 16.5 points on a 32-point scale.
39. Illinois State Board of Education School Report Card 2003.
40. In some instances, parents are also required to submit a writing sample; however, this requirement is often waived for parents whose first language is not English.
41. One business did not resign for year two.

- ⁴². Based on California's Academic Performance Index. For more information, visit www.cde.ca.gov.
- ⁴³. Nelson, F.H., Rosenberg, B., & Meter, N.V. (2004, August). *Charter school achievement on the 2003 national assessment of educational progress*. Washington, DC: American Federation of Teachers.
- ⁴⁴. Academic Performance Index (API) is the foundation of California's Public Schools Accountability Act of 1999 (PSAA). The API is a numeric index (or scale) that ranges from a low of 200 to a high of 1000 and measures the academic performance and growth of schools. A school's score on the API is an indicator of a school's performance level.
- ⁴⁵. Refer to California State Board of Education policies for charter school admissions.
- ⁴⁶. High Tech High's zip code policy is explained in detail on its Web site at www.hightechhigh.org.
- ⁴⁷. Source: www.act.org.
- ⁴⁸. Researchers are aware that no causal references to the Gates Foundation may be made at this time based on the initial data. It is only through a more thorough and long-term study that researchers can see the impact of specific programs. We refer you to the long-term evaluation underway as cited in Note number 7.

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